SMOKING AND ADDICTION

Tobacco smoking has been a popular custom for hundreds of years. Individuals have chosen to smoke or not to smoke, to continue or to quit, as a matter of personal preference and free choice. In more recent years, however, antismoking attacks have suggested that smokers are unable to make free-will choices, particularly about whether to quit smoking. Indeed, anti-smokers contend that cigarette smokers are "addicts." Cigarette smokers are not "addicts." They are normal, rational people who happen to enjoy smoking, an activity that is the target of a highly vocal group.

It seems that by calling smokers addicts, antismokers hope to eventually eliminate smoking as a social custom. Indeed, the social and political underpinning of the addiction claim was admitted by Dr. Morris A. Lipton, one of several scientists who was involved in developing the United States government's official position on smoking and addiction in the early 1980s. He gave the following reason for the government's use of the addiction label: "It was selected because it's sort of a dirty word."[1] Thus, it should be readily apparent that the term addiction was intended to have an emotional impact, and that it has been applied to smoking with little regard for its scientific meaning.

Smoking is a Voluntary Activity

Those who claim smoking is an addiction obviously hope to imply that it is an involuntary act on the part of smokers--that they are compelled to smoke. But everyday observations make it clear that decisions about smoking reflect freely-made personal choices. Simply put, people smoke because they want to and because they enjoy it. It may become a habit, but they are not compelled to continue. Whether an individual continues to smoke or quits is a voluntary decision that each smoker makes. As noted by a staff member of the United Kingdom's Office on Population Censuses and Surveys, decisions to quit or continue smoking reflect "a rational and reasoned choice that smokers make and periodically renew."[2]

Proponents of the view that smoking is an addiction rely strongly on pharmacological reports to support their claim that smokers do not have this choice. There are two broad reasons why this literature does not provide a valid basis for such a claim. First, this literature has an extremely narrow focus and does not fully consider the many complex and personal motivations for smoking. Second, the question of whether smoking is a voluntary act is more than just a scientific question. It also involves the philosophical concept of "free will," a concept that is generally not addressed in the scientific literature on this subject.

The narrow nature of the pharmacological literature is reflected in its almost exclusive focus on nicotine. It does not adequately take into account the psychological and social functions that smoking may have. Nor does it properly recognize the importance of each smoker's decision-making processes. Perhaps the most well-known example of this approach is the 1988 United States Surgeon General's Report titled "Nicotine Addiction."[3] As noted previously, even before its publication, the U.S. government had taken the position that smoking is an addiction in which nicotine has a pivotal role. That may have made the Report's characterization of smoking as an addiction to nicotine inevitable.

A similar emphasis on nicotine is seen in a 1989 Canadian report titled "Tobacco, Nicotine, and Addiction."[4] This report was prepared under the auspices of the Royal Society of Canada and was an attempt to respond to the Canadian government's question of whether smoking should be labeled an addiction, a dependence, or a habit. The report concentrates on pharmacological literature and on nicotine in particular. It excludes serious discussion of complex psychological and social factors associated with smoking behavior. As with the 1988 U.S. Surgeon General's Report, the limited focus almost seemed to predetermine the Canadian report's conclusion that smoking is an addiction.

The antismokers' emphasis on pharmacological literature is misplaced not simply because its narrowness excludes other potentially important factors involved in smokers' decisions about their habit. It also ignores the inherent inability of such reports either to prove or disprove the philosophical question of whether a behavior is voluntary. In this regard, both the American Medical Association (AMA) and the American Psychiatric Association (APA) have raised questions about whether a scientific basis exists for opinions regarding volition in general, not to mention a specific individual's volition. As stated by the AMA: "[F]ree will is an article of faith, rather than a concept that can be explained in medical terms. . . ."[5] Similarly, the APA stated: "The concept of volition is the subject of some disagreement among psychiatrists."[6]

In the final analysis, the antismokers' claim that so-called addiction to smoking makes a person unable to control his behavior is little more than a philosophical position. It conveniently fits into the antismokers' agenda to ostracize tobacco products and their users. However, this claim is not only unsubstantiated by, and largely unrelated to, pharmacological literature, but it is clearly at odds with the daily common sense observation that smokers make a free choice to smoke.

Smoking Does Not Fit The Scientific Meaning of Addiction

The word "addiction," often used interchangeably with "dependence," is a scientific term that generally refers to objective physiological effects of drugs -- namely intoxication, physical dependence, withdrawal, and tolerance. Intoxication means that when an addict uses drugs, he is trying to escape reality. His psychological and behavioral functioning deteriorates. Physical dependence means that an addict experiences an agonizing, potentially life-threatening, withdrawal syndrome when he has not obtained his accustomed "fix." Tolerance means that an addict's body needs ever greater levels of drug intake to regain the intoxicating "high" which is so important in his life. Besides their medical implications, all of these physical effects in turn lead to a progressive decrease in the addict's ability to function, on both an individual and societal level.

It is an inherent quality of addictive drugs that the motivations for their use fluctuate between the desire for a state of intoxication and the need to avoid or reduce the adverse physical symptoms of withdrawal. Regardless of where an addict is in this continuous cycle of intoxication and withdrawal, his ability to reason and to judge is impaired. Thus, he is unable to make rational decisions affecting his life in general, much less about whether to continue or quit his drug use.

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Does the cigarette smoker fit this picture? Of course not. Smokers do not seek to get "high." Their ability to think rationally is never compromised by smoking. They make reasoned choices about smoking and other aspects of their lives. Thus, they cannot be considered addicted or dependent in any sense comparable to true addictions, such as those involving heroin or cocaine. As an analysis by the German federal government concludes: "No major dependence, in the sense of addiction, has been proven to be caused by the consumption of tobacco products."[7] In short, although cigarette smoking may be a habit for many smokers, it does not fall within the scientific meaning of addiction.

The dramatic physical, psychological and societal effects of drug addiction are in sharp contrast with the simple pleasures of cigarette smoking. Despite this obvious fact, some researchers have attempted to broaden the definition of addiction so that it includes smoking. Unfortunately, this relegates addiction to little more than a description of any frequently occurring behavior. That seems to be why the word addiction is sometimes used to describe distance running or jogging, watching television, sexual activity, even shopping. In the United States, former Surgeon General C. Everett Koop also contributed to the misuse of the term when he said in 1982 that video games are "addicting."[8]

Attempts to dilute the meaning of the word addiction are also reflected in the increasing use of the term dependence. This term is not used in the sense of physical dependence, which specifies the precise and objective characteristics of withdrawal. Rather, it often seems to be applied to any repetitive behavior that may be important to a person and, hence, may be difficult to stop. Even as early as 1974, Reginald Smart of Canada's Addiction Research Foundation noted that terms such as addiction and dependence "cover too much and attempt to bring under single rubrics types of drug use that are extremely disparate."[9] Similarly, Dr. David Warburton, of Britain's Reading University, observed: "We all are 'dependent' for our ordinary happiness, gratification, emotional well-being and general quality of life on a whole range of people and objects."[10] In short, the terms "addiction" and "dependence" become almost scientifically meaningless when they are used merely as descriptions of any valued behavior or well-engrained habit.

Smoking Does Not Involve Physical Dependence or Tolerance

Physical dependence, as demonstrated by a medically serious withdrawal syndrome, has been a central feature of traditional views of addiction. Yet, it has not been demonstrated that cigarette smokers develop physical dependence. Although some

people describe unpleasant feelings when they quit smoking, these are very inconsistent, generally not long-lasting and mild. They appear to be quite similar to the sort of psychological feelings people often have when they stop doing any enjoyable activity. According to a 1984 review of the smoking cessation literature, any evidence for physical dependence on smoking is highly questionable. It concluded that "the weight of the evidence does not support a view that unpleasant physical and psychological effects necessarily follow abstinence from smoking." Many of the reported effects following smoking cessation were noted to be "highly idiosyncratic with little known about the causal mechanisms."[11]

The inconclusive literature on physical dependence in smokers may be why this requirement is not part of the definitions of addiction in several governmental reports. Perhaps only by excluding physical dependence was it possible to call smoking an addiction. This appears to be the approach taken in the 1989 Royal Society of Canada report, which described addiction as "a strongly established pattern of behavior" but did not mention physical dependence in its definition.[12] Similarly, the 1988 U.S. Surgeon General's Report discussed addiction as a kind of substance use that "controls or strongly influences behavior."[13] Thus, even though both reports label smoking an addiction, their definitions

emphasize vague behavioral factors that do not distinguish between mere habits and true addictions.

Removing physical dependence from the definition constitutes a step backward in terms of understanding drug addiction. In fact, doing so may be seen as an admission of defeat in the scientific debate concerning the nature of smoking behavior. It has not been scientifically established that physical dependence occurs in cigarette smoking. What is clear is that whatever minor effects smoking may have are in no way comparable to the physical disruption produced by demonstrably addictive drugs.

Neither have cigarette smokers been shown to develop tolerance in any meaningful sense. By contrast, in drug addiction, tolerance reliably occurs and is reflected in a progressive increase in the level of drug use, as the addict seeks to become intoxicated or "high." The existence of tolerance usually indicates that there have been underlying physical changes that make it necessary to take increasing amounts of the drug to obtain the same previously experienced effects.

Tolerance claims concerning smoking tend to be highly anecdotal. For example, it is often pointed out that beginning smokers take a while to get used to the habit. The implication is that this is somehow related to nicotine, but this is a misuse of

the concept of tolerance. All habits take time to become established. For example, some mild degree of "tolerance," or increasing levels of an activity, is characteristic of many behaviors. It has been observed, for example, that drug addictions are not "uniquely characterized" by tolerance, which is "in fact a very general feature of the family of habits."[14]

Furthermore, the typical pattern of smoking, which tends to remain at a fairly constant level throughout the smoker's life, argues against the applicability of tolerance. Fairly soon after choosing to smoke, it has been noted, smokers "rapidly arrive at their preferred number of cigarettes per day and this number remains stable for years."[15] This is in contrast to heroin and cocaine addicts, who continue to increase their levels of drug intake.

1988 Surgeon General's Report

The pronouncement on "nicotine addiction" by the 1988 U.S. Surgeon General's Report[16] received considerable press attention. This governmental report took an extreme position, labeling nicotine as an addictive substance similar to heroin or cocaine. However, the Report has been strongly criticized. In the United Kingdom, for example, Dr. Warburton argued that there are major differences between cigarette smoking and addictive drug use. He contended that the Surgeon General "ignored the

discrepancies in his enthusiasm to find criteria to compare nicotine use with heroin and cocaine use."[17] After a detailed review of the Surgeon General's criteria, he suggested that the addiction claim was politically motivated.

Professor Albert Hirsch, head of the Department of Pulmonary Medicine at the University of Paris, had a similar reaction to the Report. Although Dr. Hirsch is a vocal critic of the tobacco industry, he noted that tobacco "cannot be compared to drugs, especially hard drugs like heroin or other narcotics." He characterized such comparisons as an attempt "to fight an evil with misstatements or distortions of the truth."[18]

Even within the United States, strong criticisms have been raised concerning the Surgeon General's addiction claim. In U.S. Congressional testimony concerning the Report, a noted clinical psychologist, Dr. Theodore Blau, described the nicotine addiction claim as "misleading and potentially harmful."[19] Similarly, Dr. Stephen Raffle, a clinical psychiatrist at the University of California, San Francisco, said he considered the Surgeon General's Report to be "narrow and one-sided." He contended its conclusion was "inevitable" because it "does not contain a psychiatric, psychological or sociological perspective."[20]

Smokers Can Quit Smoking When They Decide To Do So

Some antismokers have argued that reports which conclude that most smokers continue to smoke even though they say they want to quit indicate the extreme difficulty in cessation and, hence, support the addiction hypothesis. However, reports of smokers' desires to quit smoking may be misleading. Even Lynn T. Kozlowski, a Canadian scientist well-known for his antitobacco views, noted that "answers to questions on 'wanting to stop' and 'trying to stop' have regularly been used uncritically." He "encouraged caution in what is made of what smokers say about their wish to give up smoking and their attempts to do so" and advised that "both what smokers say about their smoking and what researchers make of these statements should be read skeptically."[21]

The same could be said for some literature on smoking behavior that has implied that quitting smoking is a nearly impossible task, at which only a few succeed. This forms the basis for the claim that the "drug" nicotine has taken over people's ability to choose whether or not to smoke. But this is not a credible position when one looks at the facts. After all, even the 1988 Surgeon General's Report noted that over 41 million people in the United States have quit smoking -- 90 percent of them on their own.[22] In 1989, the Surgeon General made this point even

more dramatically, noting that: "Nearly half of all living adults who ever smoked have quit."[23]

Moreover, the effort involved in quitting smoking is often highly exaggerated. If and when a smoker decides to quit, he might at most experience reactions that are very similar to those psychological feelings he might have after giving up any well-liked habit, such as gum chewing or watching television. The ability of smokers to quit when they choose to do so has been recognized even by many of the more well-known opponents of smoking. For example, consider the following:

> It may also be that, for the general public, the stories circulating about the agony of abstinence serve as a self fulfilling prophesy: smokers expect it to be painful and therefore it is. Many give up their attempts to break the habit at the first sign of discomfort, anticipating greater pain, which in reality is not forthcoming.[24]
>
> [I]t is quite apparent that most smokers can stop without formal help.[25]
>
> I deplore those who characterize quitting smoking as a tortured, almost impossible process. For many people, it is easy; for most it is somewhere between easy and difficult; and only for a minority is it really difficult.[26]

Furthermore, much has been made of the alleged high relapse rates among quitters. However, studies of such rates have been almost exclusively based on "therapeutic" samples -- that is,

people who have had difficulty in quitting smoking. In the words of one researcher, a conclusion to the effect that cigarette smoking is a very difficult habit to break is "based largely on the results of numerous studies of single therapeutic interventions with populations of self-selected subjects who had actively sought help."[27] A more realistic picture of quitting is reflected in the behavior of the vast majority of smokers who quit on their own.

Nicotine Gum Does Not Substitute For Smoking

The inability of nicotine gum to provide a substitute for cigarettes also demonstrates that the motivations for smoking are much more complex than simply to obtain nicotine. A nicotine gum has been marketed for several years in some European countries, and more recently in North America. It is sold as a smoking cessation "aid" and is often used in research studies of smoking behavior.

If, as proponents of the addiction view maintain, people smoke cigarettes only to obtain nicotine, then nicotine gum should satisfy the desire for a cigarette. In fact, the gum should be interchangeable with smoking and should make quitting smoking a simple matter of switching from cigarettes to the gum. However, nicotine gum has not been shown to have these effects. For example, people who quit smoking sometimes express the feeling that they

have a desire or craving to smoke. If this so-called craving were for nicotine, then it would seem that nicotine gum should eliminate it. Yet, even researchers who believe smoking is an addiction to nicotine report that nicotine gum does not have this effect.[28] Also contrary to what proponents of the addiction view would predict, nicotine gum alone is of questionable usefulness as a smoking cessation aid. For example, when nicotine gum is given as a cessation aid in a general medical practice, its effect on cessation rates has been described as "either small or nonexistent."[29]

Smoking Is Not a "Gateway" to Drug Use

In recent years, claims have been made that cigarette smoking serves as a "gateway drug" to the use of "hard" drugs. This is a very questionable claim, but it was vigorously put forward by a former director of the United States National Institute on Drug Abuse, Dr. William Pollin,[30] and more recently by former Surgeon General Koop in his 1988 report."[31] United States government researchers continue to advance this view.[32]

Although it has sometimes been reported that a chronological order may exist between smoking and illicit drug use, this cannot be considered to mean a cause-and-effect relationship. After all, even if a hard drug user first smoked

cigarettes, he also undoubtedly first did a large variety of other things, such as drink milk or soft drinks, eat ice cream, ride a bicycle and so on. The point should be obvious: Just because one activity chronologically precedes another does not mean that the activities are causally related.

It is also important to note that even studies claiming an association between smoking and hard drug use report that the relationship, if any, is quite small and of dubious predictive value. For example, Dr. John O'Donnell, a researcher writing in a United States government publication, noted:

> Whatever the nature of the association, it is small, and would not suggest that cigarette use would be a useful predictor of later drug use.[33]

A similar conclusion was reached in a study of U.S. adults which attempted to assess the relationship between use of marijuana, alcohol and tobacco. Evidence for this relationship was described as "tenuous."[34]

DSM-III and DSM-III-R

Another technique sometimes used by antismoking groups in attempting to build credibility for a cigarette addiction claim is to argue that this is the conclusion of other authoritative

organizations. For example, the third edition of the Diagnostic and Statistical Manual (DSM-III) of the American Psychiatric Association (APA), published in 1980, is often cited for its inclusion of the terms "tobacco dependence" and "tobacco withdrawal."[35] DSM-III marks the first time smoking behavior appeared in the APA's diagnostic manual. Its inclusion may have been influenced by a variety of considerations not relating to science. In this regard, a noted United States psychologist, Dr. William T. McReynolds, stated that introducing new psychiatric diagnoses into DSM-III involved processes that are "social and political, not scientific, in nature."[36] Also, the potential influence of financial considerations may have been present because insurance reimbursement for the "treatment" of smokers would not be possible without tobacco's inclusion in DSM-III.

Moreover, DSM-III's criteria for "tobacco dependence" are arguably largely meaningless because they can be used to classify almost any smoker as "tobacco dependent." In one survey of the United States general population, 90 percent of the smokers were reported to fulfill the DSM-III criteria for "tobacco dependence." This research, reported by Dr. John Hughes, a researcher at the University of Vermont, was supported by the U.S. National Institute on Drug Abuse. Despite this support from a strongly antismoking organization, Dr. Hughes and his colleagues

stated that their results suggest that the DSM-III criteria for "tobacco dependence" are "overinclusive."[37]

Perhaps in an attempt to resolve some of the weaknesses in DSM-III, a revised manual known as DSM-III-R was published in 1987.[38] In DSM-III-R, the terms "tobacco dependence" and "tobacco withdrawal" were changed to "nicotine dependence" and "nicotine withdrawal." DSM-III-R also revised some of the diagnostic criteria related to smoking, but these new criteria, as in DSM-III, often pertain to amorphous behavioral or psychological factors, rather than the objective physiological consequences of true addictive drug use. For example, DSM-III-R lists psychological criteria such as "desire" to quit, or "time spent" in the activity. Although four of the nine criteria allude to physiological factors, the remaining five are psychological or behavioral. Since only three are required for the diagnosis of nicotine dependence, the physiological criteria may be irrelevant to diagnosing an individual smoker. Furthermore, with regard to one of the physiological criteria, DSM-III-R specifically excludes tobacco by noting that with smoking there is an "absence of a clinically significant nicotine intoxication syndrome."[39]

The APA's inclusion of smoking-related "withdrawal" diagnoses in these manuals does not establish that physical dependence occurs in smokers. In fact, both DSM-III and DSM-III-R

clearly state that many of the critical scientific questions related to possible nicotine "withdrawal" remain unanswered. Both versions concede that it is not known whether a reaction observed in an exsmoker is really withdrawal or merely some psychological response. DSM-III-R comments, for example, that any so-called "withdrawal" could simply reflect frustration due to giving up a pleasurable habit, or the "loss of a reinforcer."[40]

The dubious significance of the diagnosis of "nicotine withdrawal" is perhaps most strikingly clear in DSM-III-R's own admission that no one knows whether this diagnosis has anything to do with quitting smoking. It states that: "Whether severe Nicotine Withdrawal decreases the ability to stop smoking or remain abstinent from smoking is unknown."[41]

In short, the tobacco-related terminology introduced by the APA's diagnostic manuals is overbroad and unhelpful in providing an explanation for smoking behavior. The diagnostic criteria given in DSM-III and DSM-III-R do <u>not</u> tell us whether smoking is an addiction or whether it is simply a habit. Consequently, these manuals fail to further the scientific understanding of smoking behavior.

Conclusion

In recent years, there have been increasingly frequent attacks on smoking, marked by attempts to label it an addiction. Lacking scientific demonstration of physiological criteria for addiction, these attacks have taken on a distinctly emotional and political tone. In fact, the "addiction" label appears to have been applied to smoking with little regard for its scientific meaning. Cigarette smoking is more accurately classified as a habit. As is the case when any habit is given up, a smoker who decides to quit needs the motivation and desire to act on that decision. There is nothing in cigarettes which interferes with a smoker's ability to decide to quit and to carry out that decision. If that were not the case, how does one explain that in the United States alone, over 41 million people, nearly half of all living adults who ever smoked, have quit smoking, most of them without professional help?

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